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WOLF GREENFIELD (Microsoft Corporation)
C/O WOLF, GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206

EXAMINER	
BATURAY, ALICIA	
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10/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/804,400	BAHL, PRADEEP	
	Examiner	Art Unit	
	Alicia Baturay	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed 14 July 2008.

2. Claims 1, 2, 6, 11-13, 16, 21 and 22 were amended.

3. Claim 26 was cancelled.

4. Claims 1-25 and 27-30 are pending in this Office Action.

Response to Amendment

5. Applicant's amendments and arguments with respect to 1-25 and 27-30 filed on 14 July 2008 have been fully considered but they are deemed to be moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 2, 8, 10-12, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama et al. (U.S. 6,904,466) and further in view of Kim (U.S. 7,116,654).

Ishiyama teaches the invention substantially as claimed including the disclosed mobile communication scheme enables easy change of a connected location of a mobile computer on the IP network when the mobile computer leaves its home network, without requiring the use of a home agent, while providing a sufficient level of security. The mobile computer transmits a packet from a visited site network to a correspondent by encapsulating an inner packet having a home address as an original source address within an outer packet having a current location address as a source address. The correspondent which received this encapsulated packet recognizes the source addresses of the outer and inner packets of the encapsulated packet as the current location address and the home address of the mobile computer, respectively, so that the correspondent can transmit a packet to the mobile computer thereafter by encapsulating an inner packet having the home address as a final destination address within an outer packet having the current location address as a destination address (see Abstract).

8. With respect to claim 1, Ishiyama teaches a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

9. With respect to claim 2, Ishiyama teaches the invention described in claim 1, including the method of further comprising the steps performed by the mobile node of:

Connecting to a new network location; receiving the second address differing from the first address previously registered with the authoritative name server (Ishiyama, col. 8, lines 55-58); registering the second address with the authoritative name server (Ishiyama, col. 9, lines 11-13); and issuing a first binding update to a correspondent node to which a connection was previously created while the mobile node resided at the first address, wherein a specified destination address for the first binding update specifies a first correspondent node address (Ishiyama, col. 8, line 66 – col. 9, line 10).

10. With respect to claim 8, Ishiyama teaches the invention described in claim 1, including a method for facilitating maintaining connectivity between a mobile network node and a

correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35) and the method wherein specifying the supplementary value comprises specifying a time-to-live (TTL) value of zero (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

11. With respect to claim 10, Ishiyama teaches the invention described in claim 1, including the method wherein the authoritative name server is a domain name system (DNS) server (Ishiyama, col. 8, lines 9-14).

12. Claims 11, 12, 18 and 20 do not teach or define any new limitations above claims 1, 2, 8 and 10 and therefore are rejected for similar reasons.

13. Claims 3, 6, 7, 13, 16, 17, 21-23, 27, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Kim and further in view of Comstock (U.S. 6,452,920).

14. With respect to claim 3, Ishiyama teaches the invention described in claim 2, including a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim do not teach the use of a binding update acknowledgement from the correspondent node.

However, Comstock teaches the method further comprising the steps of: receiving, by the mobile node, a binding update acknowledgement from the correspondent node; and restoring a disrupted connection between the mobile node and correspondent node (Comstock, col. 3, lines 28-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to enable the use of a binding update. One would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

15. With respect to claim 6, Ishiyama teaches the invention described in claim 2, including a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without

using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim does not explicitly teach a tunnel between a mobile node and a virtual private network server.

However, Comstock teaches the method wherein the new network location resides outside a home network of the mobile node, and wherein the method comprises the further step of: establishing a tunnel connection between the mobile node and a virtual private network server; receiving, by the mobile node, a local network address specified by the virtual private network server, wherein the second address corresponds to the local network address (Comstock, col. 3, lines 28-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to

enable the use of a binding update. One would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

16. With respect to claim 7, Ishiyama teaches the invention described in claim 2, including a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim do not teach the use of a binding update.

However, Comstock teaches the method further comprising the step of: initiating, by the mobile node, a binding connection through a rendezvous server residing outside the home network (Comstock, col. 3, lines 28-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to enable the use of a binding update. One would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

17. With respect to claim 21, Ishiyama teaches a mobile network node facilitating maintaining connectivity with a correspondent node after changing network addresses, the mobile network node including a communications protocol stack comprising computer-executable instructions for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the computer-executable instructions facilitating performing, by the mobile node, the steps of: determining, via a policy maintained by the mobile node, that the mobile node is located outside a security domain of a home network of the mobile node (Ishiyama, col. 6, lines 13-18); registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim does not explicitly teach a tunnel between a mobile node and a virtual private network server.

However, Comstock teaches establishing a virtual private network tunnel connection through a virtual private network server (Comstock, col. 2, lines 35-54), an address of the virtual private network server being specified by the policy; receiving, from the virtual private network server, the second address for the mobile node (Comstock, col. 3, lines 28-39);

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to enable the use of a tunnel between a mobile node and a virtual private network server. One would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

18. With respect to claim 22, Ishiyama teaches the invention described in claim 23, including the method of further comprising the steps performed by the mobile node of:

Connecting to a new network location; and issuing a first binding update to a correspondent node to which a connection was previously created while the mobile node resided at the first address, wherein a specified destination address for the first binding update specifies a first correspondent node address (Ishiyama, col. 8, line 66 – col. 9, line 10).

19. With respect to claim 28, Ishiyama teaches the invention described in claim 21, including a mobile network node facilitating maintaining connectivity with a correspondent node after changing network addresses, the mobile network node including a communications protocol stack comprising computer-executable instructions for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the computer-executable instructions facilitating performing, by the mobile node, the steps of: determining, via a policy maintained by the mobile node, that the mobile node is located outside a security domain of a home network of the mobile node (Ishiyama, col. 6, lines 13-18); registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35) and the mobile network node wherein specifying the supplementary value comprises specifying a time-to-live (TTL) value of zero (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim does not explicitly teach a tunnel between a mobile node and a virtual private network server.

However, Comstock teaches establishing a virtual private network tunnel connection through a virtual private network server (Comstock, col. 2, lines 35-54), an address of the virtual private network server being specified by the policy; receiving, from the virtual private network server, the second address for the mobile node (Comstock, col. 3, lines 28-39);

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to enable the use of a tunnel between a mobile node and a virtual private network server. One

would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

20. With respect to claim 30, Ishiyama teaches the invention described in claim 21, including the method wherein the authoritative name server is a domain name system (DNS) server (Ishiyama, col. 8, lines 9-14).

21. Claims 13, 16, 17, 23 and 27 do not teach or define any new limitations above claims 3, 6 and 7 and therefore are rejected for similar reasons.

22. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Kim and further in view of Kempf et al. (U.S. 2003/0211842).

23. With respect to claim 4, Ishiyama teaches the invention described in claim 2, including a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step

comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim do not teach the use of a binding update failure.

However, Kempf teaches the method wherein the mobile node performs the further steps of: registering a binding update failure with regard to the first binding update issued to the correspondent node at the first correspondent node address (Kempf, page 5, paragraph 97).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Kempf in order to enable the use of a binding update failure. One would be motivated to do so in order to enable a correspondent node to authenticate the binding update by examining the message authentication code using the shared key.

24. Claim 14 does not teach or define any new limitations above claim 4 and therefore is rejected for similar reasons.

25. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Kim in view of Kempf and further in view of Karagiannis et al. (U.S. 2003/0018810).

26. With respect to claim 5, Ishiyama teaches the invention described in claim 4, including a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim do not teach the use of a binding update failure.

However, Kempf teaches the method wherein the mobile node performs the further steps of: registering a binding update failure with regard to the first binding update issued to the correspondent node at the first correspondent node address (Kempf, page 5, paragraph 97).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Kempf in order to enable the use of a binding update failure. One would be motivated to do so in order to enable a correspondent node to authenticate the binding update by examining the message authentication code using the shared key.

The combination of Ishiyama, Kim and Kempf do not teach sending a second binding update.

However, Karagiannis teaches the method further comprising the steps performed by the mobile node of: issuing a second binding update to the correspondent node, wherein a specified destination address for the second binding update specifies the second correspondent node address (Karagiannis, page 17, paragraph 180).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama, Kim and Kempf in view of Karagiannis in

order to enable the use of a second binding update. One would be motivated to do so in order to enable a mobile node to synchronize a handoff with a correspondent node.

27. Claim 15 does not teach or define any new limitations above claim 5 and therefore is rejected for similar reasons.

28. Claims 9, 19 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Kim in view of Comstock and further in view of Millet (U.S. 6,434,627).

29. With respect to claim 9, Ishiyama teaches the invention described in claim 2, including a method for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the method comprising performing, by the mobile node, the steps of: registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim do not teach the use of a binding update.

However, Comstock teaches the method further comprising: issuing a naming query requesting a current address of the correspondent node, before receiving a response to the first binding update (Comstock, col. 5, lines 38-56); issuing a second binding update to the correspondent node, wherein a specified destination address for the second binding update specifies the second correspondent node address (Comstock, col. 4, line 66 – col. 5, line 7).

The combination of Ishiyama, Kim and Comstock does not explicitly teach issuing a naming query requesting the address of a node.

However, Millet teaches receiving a naming query response to the naming query including a second correspondent node address for the correspondent node; determining that the second correspondent node address differs from the first correspondent node address (Millet, col. 10, lines 22-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama, Kim and Comstock in view of Millet in order to enable issuing a naming query requesting the address of a node. One would be

motivated to do so in order to enable address translation systems for mapping IP addresses of the mobile nodes to globally unique IP addresses available on a network where mobile nodes temporarily attach.

30. Claims 19 and 29 do not teach or define any new limitations above claim 9 and therefore are rejected for similar reasons.

31. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Kim in view of Comstock and further in view of Kempf.

32. With respect to claim 24, Ishiyama teaches the invention described in claim 21, including a mobile network node facilitating maintaining connectivity with a correspondent node after changing network addresses, the mobile network node including a communications protocol stack comprising computer-executable instructions for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node changes a first address to a second address, the second address being different than the first address, the computer-executable instructions facilitating performing, by the mobile node, the steps of: determining, via a policy maintained by the mobile node, that the mobile node is located outside a security domain of a home network of the mobile node (Ishiyama, col. 6, lines 13-18); registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col.

6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim does not explicitly teach a tunnel between a mobile node and a virtual private network server.

However, Comstock teaches establishing a virtual private network tunnel connection through a virtual private network server (Comstock, col. 2, lines 35-54), an address of the virtual private network server being specified by the policy; receiving, from the virtual private network server, the second address for the mobile node (Comstock, col. 3, lines 28-39);

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to enable the use of a tunnel between a mobile node and a virtual private network server. One

would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

The combination of Ishiyama, Kim and Comstock do not teach the use of a binding update failure.

However, Kempf teaches the method wherein the mobile node performs the further steps of: registering a binding update failure with regard to the first binding update issued to the correspondent node at the first correspondent node address (Kempf, page 5, paragraph 97).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama, Kim and Comstock in view of Kempf in order to enable the use of a binding update failure. One would be motivated to do so in order to enable a correspondent node to authenticate the binding update by examining the message authentication code using the shared key.

33. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Kim in view of Comstock in view of Kempf and further in view of Karagiannis.

34. With respect to claim 25, Ishiyama teaches the invention described in claim 24, including a mobile network node facilitating maintaining connectivity with a correspondent node after changing network addresses, the mobile network node including a communications protocol stack comprising computer-executable instructions for facilitating maintaining connectivity between a mobile network node and a correspondent node after the mobile network node

changes a first address to a second address, the second address being different than the first address, the computer-executable instructions facilitating performing, by the mobile node, the steps of: determining, via a policy maintained by the mobile node, that the mobile node is located outside a security domain of a home network of the mobile node (Ishiyama, col. 6, lines 13-18); registering the second address, for the mobile node, with an authoritative name server (Ishiyama, col. 7, line 61 – col. 8, line 14) without using a home agent (Ishiyama, col. 6, line 60 – col. 7, line 6), wherein the registering step comprises: specifying the second address for the mobile node (Ishiyama, col. 7, line 64 – col. 8, line 6).

Ishiyama does not explicitly teach a method of ensuring the second address will not be cached within non-authoritative name servers.

However, Kim teaches specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers (Kim, col. 7, lines 19-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishiyama in view of Kim in order to enable a method of ensuring the current address will not be cached within non-authoritative name servers. One would be motivated to do so in order to facilitate the correspondent node delivering packets directly to the current care-of address of the mobile host.

The combination of Ishiyama and Kim does not explicitly teach a tunnel between a mobile node and a virtual private network server.

However, Comstock teaches establishing a virtual private network tunnel connection through a virtual private network server (Comstock, col. 2, lines 35-54), an address of the virtual private network server being specified by the policy; receiving, from the virtual

private network server, the second address for the mobile node (Comstock, col. 3, lines 28-39);

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama and Kim in view of Comstock in order to enable the use of a tunnel between a mobile node and a virtual private network server. One would be motivated to do so in order to facilitate the changing of a computing device's point of attachment to the Internet.

The combination of Ishiyama, Kim and Comstock do not teach the use of a binding update failure.

However, Kempf teaches the method wherein the mobile node performs the further steps of: registering a binding update failure with regard to the first binding update issued to the correspondent node at the first correspondent node address (Kempf, page 5, paragraph 97).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama, Kim and Comstock in view of Kempf in order to enable the use of a binding update failure. One would be motivated to do so in order to enable a correspondent node to authenticate the binding update by examining the message authentication code using the shared key.

The combination of Ishiyama, Kim, Comstock and Kempf do not teach sending a second binding update.

However, Karagiannis teaches the method further comprising the steps performed by the mobile node of: issuing a second binding update to the correspondent node, wherein a

specified destination address for the second binding update specifies the second correspondent node address (Karagiannis, page 17, paragraph 180).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ishiyama, Kim, Comstock and Kempf in view of Karagiannis in order to enable the use of a second binding update. One would be motivated to do so in order to enable a mobile node to synchronize a handoff with a correspondent node.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at 7:30am - 5pm, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alicia Baturay
October 25, 2008

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446